



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,342	09/23/2005	Henricus Johannes Louis Marie Vullings	NL 030365	1331
24737 7590 06/28/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER HRUSZKEWYCZ, ADRIAN	
			ART UNIT 2876	PAPER NUMBER
			MAIL DATE 06/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,342	Applicant(s) VULLINGS ET AL.	
	Examiner Adrian M. Hruszkewycz	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12 is/are rejected.
- 7) ☒ Claim(s) 8-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

Claims 1-12 are pending in this application.

Claim Objections

1. Claims 1, 2, 3, 4, 5, 6, 8, 11 and 12 objected to because of the following informalities: Claims contain 1, 2, 3, 4, 5, 6, 8, and 12 either the term "fictitious marking element" or "transition," however it is unclear what these are referring to. For the purpose of examination, a "fictitious marking element" is being interpreted as a unique group of elements on the substrate within a certain field of view and a "transition" is being interpreted to be the border between the substrate and element. Appropriate correction is required.

Claims 2 and 6 also contain the phrase "enclose an angle to each other." As explained previously, a transition is being interpreted as the border between the substrate and element. Since an element on the substrate has two such transitions that are parallel to each other, it is unclear how these transitions "enclose an angle to each other" and it is being interpreted that parallel transitions meet this limitation. Appropriate correction is required.

Claim 11 is objected to because although it is clear that a component layer is used for determining the marking element, it is unclear whether or not the conductive and anti-soldering layers are also used. It is being interpreted that they are used. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-7 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Villain (WO 03/005793).

Consider claim 1. Villain discloses a method of selecting a reference segment (applicant's fictitious marking element) by analyzing the design of the board (applicant's design data) in order to select which segments appearing on the board should be used subsequently as reference groups of segments (p. 6, line 8). This group must not be confusable with any other group of segments that may appear in the camera's field of view (p. 8, line 13) and is therefore unique for the predefined area of the substrate.

Consider claim 2. Villain discloses the acquired profile is next analyzed so as to detect the changes in brightness that correspond to segment edges (applicant's transitions) using standard edge transition techniques (p. 13, line 3). It is being interpreted that these transitions "enclose an angle to each other."

Consider claims 3 and 4. Villain discloses conductors on a circuit board are either horizontal, vertical, or diagonal (p. 9, line 8). The horizontal and vertical transitions are transverse to each other and in an x,y coordinate system.

Consider claim 5. Villain discloses if there are no other groups confusable with the candidate reference group, this means that the candidate segment under consideration is unambiguous and is suitable for use as a reference group (p. 10, line 31). This would involve comparing the transitions of the selected segment with at least two other transitions.

Consider claim 6. The solid lines in Fig. 4B of Villain indicate conductive tracks selected to be a reference group. Each track portion is bounded by at least two transitions running substantially parallel with a diameter between them. It is being interpreted that these diameters "enclose an angle to each other."

Consider claim 7. Villain discloses if there are no other groups confusable with the candidate reference group, this means that the candidate segment under consideration is unambiguous and is suitable for use as a reference group (p. 10, line 31). This would involve comparing the diameters of the selected segment with at least two other diameters.

Consider claim 12. Villain discloses his reference elements are used to allow for circuit components to be placed accurately (p. 14, line 32).

Allowable Subject Matter

4. Claims 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2876

5. The following is a statement of reasons for the indication of allowable subject matter: The prior art or record, taken alone or in combination, fails to teach or fairly suggest a method as recited in these claims. Specifically, a method using the relative positions of at least two circles of selected area as fictitious marking elements, or the use of a component layer, conductive layer, and anti-soldering layer for determining the marking element.

Conclusion

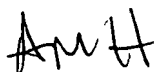
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WO 03/005792 and US 5,974,169 both disclose methods of generating fictitious marking elements on a circuit board.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrian M. Hruszkewycz whose telephone number is (571)272-9799. The examiner can normally be reached on Monday through Thursday 8:30-5:00 E.S.T..

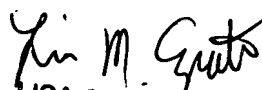
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2876

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Adrian Hruszkewycz
Patent Examiner



LISA CAPUTO
PRIMARY PATENT EXAMINER